

**M 5.2, near the east coast of Honshu, Japan**

Origin Time: 2023-09-08 09:28:48 UTC (Fri 18:28:48 local)  
Location: 38.9143° N 142.1007° E Depth: 40.5 km

**PAGER  
Version 5**

Created: 3 weeks, 5 days after earthquake

**Estimated Fatalities**

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

**Estimated Economic Losses**

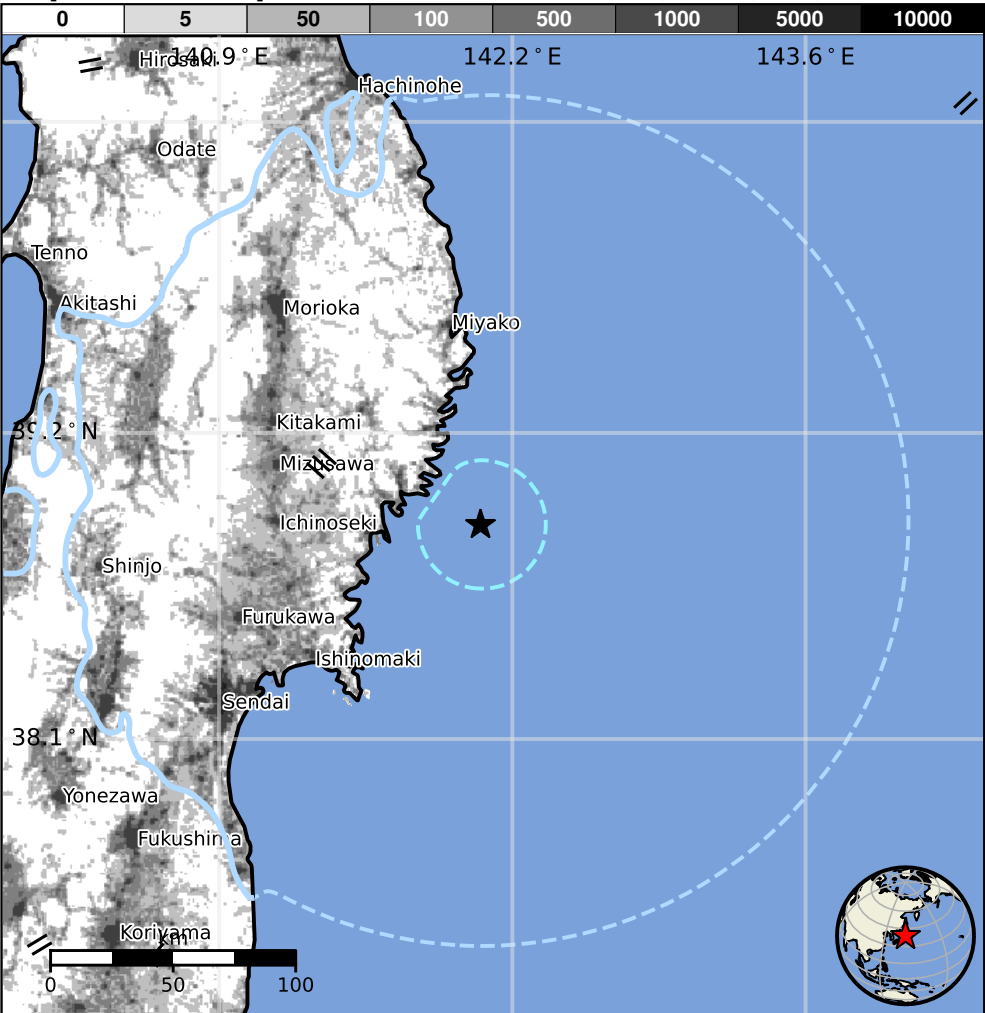


**Estimated Population Exposed to Earthquake Shaking**

ESTIMATED POPULATION EXPOSURE (k=x1000)		—*	7,803k	3k	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

\*Estimated exposure only includes population within the map area.

**Population Exposure**



**Structures**

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are heavy wood frame and reinforced/confined masonry construction.

**Historical Earthquakes**

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1994-12-28	213	7.7	VII(130k)	3
1978-06-12	77	7.6	VIII(1,304k)	22
1983-05-26	310	7.7	VII(174k)	104

Recent earthquakes in this area have caused secondary hazards such as landslides and fires that might have contributed to losses.

**Selected City Exposure**

from GeoNames.org

MMI	City	Population
III	Ofunato	35k
III	Tono	27k
III	Yamada	20k
III	Kamaishi	43k
III	Mizusawa	61k
III	Ichinoseki	63k
III	Morioka	295k
III	Sendai	1,063k
III	Akita	326k
II	Fukushima	294k
II	Yamagata	255k

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.  
<https://earthquake.usgs.gov/earthquakes/eventpage/us7000ku4z#pager>

bold cities appear on map.

(k = x1000)

Event ID: us7000ku4z